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CONJUNCTION WITH THE STUDY OF REPEATED SPONTANEOUS ABORTIONS

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LYMPHOBLASTIC TRANSFORMATION IN VITRO OF BLOOD LYMPHOCYTES IN
CONJUNCTION WITH THE STUDY OF REPEATED SPONTANEOUS ABORTIONS

D. Alcalay, J. Choukroun and P. Morin¹

ABSTRACT. Nonspecific placental extracts failed to induce hypersensitivity reactions in pregnant and non-pregnant women.

Recent progress concerning the understanding of the etiologies of repeated spontaneous abortions is now entering a still unexplained area. The hypothesis has been formulated that the egg implanted in the uterus may be considered as a homotransplant of a special kind. It exists in the pregnant woman in a "state of immunological grace," with a different genetic nature from hers, and (to a lesser degree) with different antigens. Hence, it appeared appropriate to investigate "cryptogenetic" repeated abortions to find a breakdown in this state of immunity tolerance. For several years now, working within the scope of research being carried out by the Maternity Service of Lariboisière Hospital, we have studied the etiology of repeated spontaneous abortions. We studied the lymphocytic reactions of these women in the presence of placental extracts.

Technique

The isolation and culturing of the lymphocytes were performed using the technique of Brandt and his associates (see the previous article).

For each subject, we used one test tube without allergen, one tube containing 100 γ of P.H.A. per milliliter of mixture, one tube containing 50 γ of proteins obtained from (commercial) placental extracts, one tube

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*Numbers in the margin indicate pagination in the foreign text.

containing 50 γ of proteins from maternal placental extracts (separated from the fetal part), and one tube containing 50 γ of fetal placental extract proteins (separated from the maternal part)¹. (Collection took place in the course of a Caesarian operation.) We considered negative those reactions which yielded a transformation percentage of less than 4% in the presence of placental extracts.

The subjects were selected from among pregnant women without special pathological histories who came for consultations at the Maternity Department at different terms of pregnancy.

These tests were performed on women who experienced repeated spontaneous abortions, pregnant or not.

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The following conclusions were reached.

1. There was no lymphoblastic transformation with respect to the non-specific placental extracts, regardless of whether they were total, maternal or fetal, as well as in women with pathological histories, regardless of whether they were pregnant or not, to the same extent as in women without previous histories of this kind.

2. Pregnant women with pathological histories showed a decrease in the percentage of transformation in the presence of P.H.A. which is comparable to that which was found in healthy women. The sole exception aborted several days after the second test. Was this a coincidence or could it be a confirmation of the fact that there was a defect in immunity tolerance in the genesis of these abortions? The validity of this hypothesis was challenged by the fact that a significant proportion of the women that had undergone abortions showed a reduced transformation level independently of their pregnancy. The latter may perhaps be indicative of an immunological problem with a more complex interpretation.

In conclusion, there does not seem to be a hypersensitivity reaction of the delayed type with respect to nonspecific placental extracts. It therefore

¹We express our appreciation to Dr. Ribeyrotte, working under Prof. B. Halpern, who kindly prepared these extracts for us.

seems appropriate to us to carry out a study in the presence of specific placental extracts and other allergens which are more specific in women showing histories of repeated spontaneous abortions.

Cover Page Title

RESULTS

The results obtained are summarized in the table below:

	Names	Term of Pregnancy in Days	Test Tube	P.H.A. Total %	Reduction in % of Transformation	Total Placental Extract	Maternal Placenta	Fetal Placenta
Non-Pregnant Subjects	Lah...	70	0.4	71.6		0.3	0.6	0.2
	You...	75	1.6	81.6		0.3	0.4	0.5
	Eva...	90	0.3	82.5		0.4	0.3	0.3
	Syl...	145	0.8	34.2		0.5	0.4	1.0
	Nav...	150	0.3			0.2	0.6	0.3
	Sie...	150	1.2	83.1		0.3	0.4	0.2
	Lex...	150		82.6		0.3	0.4	0.5
	Zdu...	180	1.3	46.6		1.7	0.6	0.4
	Val...	210	0.3			0.4	0.2	0.3
	Gro...	210	0.3			0.2	0.4	0.3
	Gui...	225	0.6	75.1		0.3	0.2	0.4
	Avi...	240		48.5		0.4	0.9	1.6
	Nid...	260				0.3	0.4	0.3
	Gui...	265	0.4	64.3		0.3	0.2	0.6
Pregnant Women With Histories of Repeated Abortions	Sud...	120	1.5	78.5				
		90	1.0	38.2				
	Duc...	165	0.5	43.9		0.3	0.7	0.9
		210				3.2	0.5	1.4
		240	0.5					0.3
		90	0.3	79.4				
	Lei...	120	0.2	65.3		0.2		
		165		21.1		0.6		0.4
		90	1.9	85.2		1.4		
	Bal...	120		30.2		0.2	0.2	0.5
		180						0.3
	Elb...	150	1.0	52.9		0.6	0.2	0.3
		210				0.3	0.4	0.2
	Sal...	180	1.2	45.2		1.2	0.7	
		90	0.8	55.2		0.2		
	Har...	180	1.1	63.5		0.3	0.5	0.4
Women With Pathological Histories	Isn...	100	1.1			0.7		
	Mur...	120	1.8			0.9	0.4	
		210	0.3	84.1		0.4	0.3	0.5
	Tan...	75	0.6	57.8		0.3		
	Chr...	90	0.5			0.4	0.5	0.9
	Dom...		1.7	73.5				
	Rat...		0.5	60.6		0.7 %		
	Lju...		3.7	46.1		2.7		
	Vir...		0.6	29.7		0.3		
	Fag...		0.9	53.0		1.3		
	Val...		0.2	30.4		0.3	0.6	0.4
	Rac...		0.3	29.6		0.2		0.4
	Che...		0.5	62.0		0.2		
	Lar...					0.5		
	Lev...		0.4				0.4	2.2
	Pet...					0.4		